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(21) International Application Number: PCT/US00/04786 (22) International Filing Date: 25 February 2000 (25.02.00) (30) Priority Data: 60/121,670                      25 February 1999 (25.02.99)      US 60/121,669                      25 February 1999 (25.02.99)      US (71) Applicant (for all designated States except US): PALL CORPORATION [US/US]; 2200 Northern Boulevard, East Hills, NY 11548-1209 (US). (72) Inventors; and (73) Inventors/Applicants (for US only): WU, Xiaosong [US/US]; 1210 Stonebridge Road, Pensacola, FL 32514 (US). HOU, Chung-Jen [US/US]; 2258 Oxford Drive, Pensacola, FL 32503 (US). DHARIA, Jayesh [IN/US]; 4051 E. Olive Road, #220, Pensacola, FL 32514 (US). KONSTANTIN, Peter [DE/DE]; Merxhausener Str. 16, D-37627 Heinade (DE). YANG, Yujing [CN/US]; 7791 Northpoint Boulevard, Pensacola, FL 32514 (US). (74) Agent: JAY, Jeremy, M.; Leydig, Voit & Mayer, Ltd., 700 Thirteenth Street, N.W., Suite 300, Washington, DC 20005 (US).	(81) Designated States: AE, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, CA, CH, CN, CR, CU, CZ, DE, DK, DM, EE, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, NO, NZ, PT, RO, RU, SD, SE, SG, SI, SK, SL, TJ, TM, TR, TT, TZ, UA, UG, US, UZ, VN, YU, ZA, ZW, ARIPO patent (GH, GM, KE, LS, MW, SD, SL, SZ, TZ, UG, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, CH, CY, DE, DK, ES, FI, FR, GB, GR, IE, IT, LU, MC, NL, PT, SE), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GW, ML, MR, NE, SN, TD, TG).  <b>Published</b> <i>With international search report.</i>	

(54) Title: POSITIVELY CHARGED MEMBRANE

## (57) Abstract

The present invention provides a positively charged microporous membrane having a protein binding capacity of about 25 mg/ml or greater comprising a hydrophilic porous substrate and a crosslinked coating that provides a fixed positive charge to the membrane. The present invention further provides a positively charged microporous membrane comprising porous substrate and a crosslinked coating comprising pendent cationic groups. The membranes of the present invention find use in a variety of applications including ion-exchange chromatography, macromolecular transfer, as well as detection, filtration and purification of biomolecules such as proteins, nucleic acids, endotoxins, and the like.